AMENDMENTS TO THE SPECIFICATION

Please add the following new paragraph at page 1, line 4:

This is a Rule 1.53(b) Divisional of Serial No. 10/087,811, filed March 5, 2002.

Please replace the paragraph at page 2, line 32 with the following rewritten paragraph:

As the first object, the present invention aims to provide an ultrasonic diagnostic device and an image processing device capable of examination with increased accuracy by increasing an apparent sampling rate applied to an ultrasound image they generates without sacrificing a resolution of the ultrasound image and real-time performance.

Please replace the paragraph at page 3, line 12 with the following rewritten paragraph:

As the third object, the present invention aims to provide an ultrasonic diagnostic device and an image processing device capable of accurately examining an object (such as a left ventricle (LV) of a heart) whose information (such as that showing a left ventricular volume (LVV)) used for diagnosis changes over time. To achieve this, the ultrasonic diagnostic device and the image processing device generate an ultrasound image corresponding to an predicted time at which the diagnostic information takes a characteristic value.

Please replace the paragraph at page 3, line 21 with the following rewritten paragraph:

For achieving the first object, the ultrasonic diagnostic device and the image processing device generate ultrasound images through sampling, associates each of the generated ultrasound image with a time stamp, and interpolates between data of the ultrasound image to generate image data corresponding to a time at which the sampling was not performed.

Please replace the paragraph at page 2, line 27 with the following rewritten paragraph:

The second object can be achieved by normalizing a cycle for ultrasound image data in accordance with time stamps associated with the ultrasound image data, and then performings the above interpolation between the ultrasound image data corresponding to the normalized cycle.

Please replace the paragraph at page 3, line 32 with the following rewritten paragraph:

The third object can be achieved by predicting a time at which a left ventricular volume (LVV) becomes a minimum or a maximum, and generatinges an ultrasound image at the predicted time.

Please replace the paragraph at page 4, line 2 with the following rewritten paragraph:

The above interpolation on characteristic quantities generates new characteristic quantities that each correspond to a time at which sampling was not performed, and diagnostic information based on such characteristic quantities can be generated. Consequently, the above ultrasonic diagnostic device can achieve examination with higher accuracy than conventional examination using the same frame rate as the present examination. In addition, since such highly accurate examination can be achieved by data processing such as interpolation of characteristic quantity, it costs ~~lower~~less than other methods which increases a maximum frame rate.

Please replace the paragraph at page 10, line 19 with the following rewritten paragraph:

FIG. 14 is used to describe the relationship between sampled image data and interpolated image data when interpolation is performed on image data;

Please replace the paragraph at page 10, line 22 with the following rewritten paragraph:

FIG. 15 is used to describer the relationship between a cross-sectional area based on sampled data and a cross-sectional area obtained through interpolation when the interpolation is performed on cross-sectional area to calculate an LVV;

Please replace the paragraph at page 13, line 28 with the following rewritten paragraph:

To achieve the above characteristic operations, the image processing unit 105 includes an image generating unit 110, a time stamp generating unit 111, an data storing unit 112, a contour extracting unit 113, an interpolated data generating unit 114, a volume calculating unit 115, and a control unit 116.

Please replace the paragraph at page 24, line 21 with the following rewritten paragraph:

As has been described, with the above non-real-time processing, interpolation can be performed on calculation data obtained from two- and four- chamber images of the LV. More specifically, normalization relative to time is performed on sets of data corresponding to a plurality of pulsation cycles, and the normalized sets of data are superimposed over ~~on~~ one another to specify an interpolation curve. Based on the specified interpolation curve, sets of data that were not sampled can be also specified. This generates data sequences containing sets of data that are arranged at shorter intervals. Following this, a pair of sets of data in the same phase is extracted from each data sequence to calculate volume and maximum and minimum values of the volume. Such processing eliminates noise and abnormal data and yields a volume value that is close to the actual volume, so that accurate diagnosis can be performed.

Please replace the paragraph at page 31, line 9 with the following rewritten paragraph:

The send/receive unit 302 has the same function as the unit 102 of the first embodiment. In addition to this function, the send/receive unit 302 has a sender/beam former which generates ultrasound and has a receiver/beam former receive an ultrasound echo in accordance with an instruction from the control unit 316.

Please replace the paragraph at page 31, line 14 with the following rewritten paragraph:

The pulsation detecting unit 303 has the same function as the unit 103 of the first embodiment. In addition to this function, the detecting unit 303 includes an ECG electrode (not shown in the figure) for obtaining the ECG signal and sendings the obtained ECG signal to the control unit 316.

Please replace the paragraph at page 33, line 28 with the following rewritten paragraph:

While performing A/D conversion on the ECG signal, the control unit 316 specifies the negative-maximum time, the end-diastolic time, and the end-systolic time in each pulsation cycle by using values of time stamps sent from the time stamp generating unit 311.

The control unit 316 performs the above series of operations over three pulsation cycles 1725-1727 so that end-diastolic times "D1"-"D3" and end-systolic times S1-S3 in these pulsation cycles 1725-1727 are specified.

Please replace the paragraph at page 34, line 13 with the following rewritten paragraph:

Similarly, the control unit 316 predicts an end-diastolic time "D5" and an end-systolic time "S5" (not shown in the figure) in a pulsation cycle 1729 (also not shown in the figure) from measured values in the pulsation cycles 1726-1728. In this way, the control unit 316 conducts prediction in every pulsation cycle. Here, the control unit 316 may calculate a difference between an predicted value and a measured value to correct the predicted value in accordance with the calculated difference.